## 3.0 SITE HISTORY AND CONTAMINANTS

The Rocky Mountain Arsenal is located east of Commerce City, Colorado, approximately 10 miles northeast of downtown Denver (Figure 3-1). In 1942, at the height of World War II, the U.S. Army purchased the 17,000 acres of land on which to manufacture chemical weapons such as chemical-filled munitions, white phosphorus, and napalm. The Army continued to use the site through the early 1980s for manufacturing, maintenance, and dismantling of chemical and incendiary munitions.

To foster post-war economic growth in the area, offset operational costs, and maintain the facilities for national security, private industry was encouraged to lease facilities at RMA. Under the lease program, Julius Hyman and Company began producing pesticides in 1946. In 1952, Shell Chemical Company acquired Julius Hyman and Company and continued to produce agricultural pesticides on-site until 1982.

Currently, there are no production chemicals, chemical weapons production or chemical weapons storage at RMA. The RVO mission is to complete the safe, timely, and cost-effective remediation and transition of the site to one of the largest urban national wildlife refuges.

## 3.1 Environmental Issues

Wastes generated during production years at RMA were disposed using widely accepted practices of the time, including disposal of liquid wastes into unlined basins, and burning and burying solid wastes. Efforts to contain liquid wastes began soon after the discovery that contaminated groundwater caused crop damage north of RMA in the mid-1950s. In 1956 the Army built Basin F, an evaporation pond designed to store liquid wastes. Believed to be the first of its kind in the country, the 93-acre, asphalt-lined pond was capable of holding 243 million gallons of liquid wastes.

Since 1975, the Army and Shell have undertaken numerous efforts to investigate and control potentially contaminated areas at the site. Beginning in 1974, Interim Response Actions (IRAs) were designed to protect off-site human health and environment from RMA pollution. Included among the 14 IRAs was the construction and operation of four boundary and on-site groundwater treatment systems responsible for treating over 1 billion gallons of groundwater each year. These systems will continue to operate as part of the final remedy.

## 3.2 Regulatory Framework

In 1989, the U.S. Army and Shell entered into the RMA Federal Facility Agreement (FFA) with the U.S. Environmental Protection Agency (EPA), the U.S. Department of the Interior, USFWS, and the Agency for Toxic Substance and Disease Registry. As part of the FFA, the Army and Shell will implement remedial actions that comply with the Comprehensive Environmental Response, Compensation and Liability Act of 1982 and other applicable regulations, laws, and agreements.

In 1995, intensive public involvement helped the Army, Shell, USFWS, Colorado Department of Public Health and Environment, and EPA reach two monumental decisions. The Off-Post ROD, signed December 19, 1995, and the On-Post ROD, signed on June 11, 1996, provide the framework, the purpose and the overall rationale for the remediation actions to be accomplished at the site.

The RMA will become one of the largest urban wildlife refuges in the country once remediation is complete as designated by the RMA National Wildlife Refuge Act of 1992 (Public Law 102-402). The Refuge Act also directs the USFWS to manage RMA as a unit of the National Wildlife Refuge System during remediation. In the event of a conflict between management of RMA as a wildlife refuge and performance of remedial response actions, the Refuge Act indicates that the remedial response actions will take priority.

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## 3.3 Wildlife Issues

The USFWS involvement at RMA began in 1986 when a winter communal roost of bald eagles, then an endangered species, was discovered on site. The USFWS soon discovered that approximately 300 wildlife species inhabit the RMA, including deer, coyotes, and owls. Under the Refuge Act, RMA will become one of more than 500 national wildlife refuges in the United States. The goals and the vision of the USFWS were released on June 17, 1996, in the Comprehensive Management Plan, which outlines development of the Refuge. While simultaneously supporting the environmental remediation and sustaining wildlife and their habitats, the plan allows public use of the Refuge through community outreach and educational programs.

Figure 3-1. RMA Site Map

